CLAIMS

1. A system of communication between an interrogator unit and a plurality of transponders (TRn),

whereby the interrogator unit is able to detect a start of sending (S) from a transponder (TR1) and then modify (M) its interrogation signal (INT) so as to maintain the other transponders (TRn) in a watching state,

whereby the silent transponders (TRn) are able to interpret the modification (M) of the interrogation signal (INT) as an extended silence command, and the detected transponder (TR1) is able to continue its sending despite the modification (M) of the interrogation signal (INT),

characterised in that, after identification of the detected transponder (TR1),

the interrogator unit, on the one hand, again modifies (M) its interrogation signal (INT) so as to extend the watching state of the silent transponders (TRn) and, on the other hand, sends a command (C) to the identified transponder (TR1), the silent transponders (TRn) again being able to interpret the modification (M) of the interrogation signal (INT) as an extended silence request,

and in that, at the end of sending its identifier (Id), the detected transponder (TR1) goes into listening mode (E) for a given duration (D) during

which it is able to interpret and then execute the command (C) sent by the interrogator unit.

2. A communication system according to Claim 1, characterised in that each transponder (TRn) has time counting means and means of reinitializing the time counting on receiving a modification (M) of the interrogation signal (INT).

3. A communication system according to Claim 2, characterised in that the time counting means are able to determine a predetermined duration (D) of listening (E) of the detected transponder (TR1), during which said transponder (TR1) sends no signal.

4. A communication system according to Claim 1, characterised in that, after the execution (EXE) of a command (C), the identified transponder (TR1) returns to listening mode (E) for the predetermined duration (D) in order to allow a new communication phase, a new modification (M) of the interrogation signal (INT) reinitializing the watching state of the non-identified transponders (TRn), and a new command (C) being sent by the interrogator unit, interpreted and executed by the identified transponder (TR1).

5. A communication system according to Claim 1 or Claim 4, characterised in that the identified transponder (TR1) resumes the cyclic sending of its identifier (Id) after a random pause time (P) in the case where no modification (M) of the interrogation signal has occurred during the duration (D) of listening (E).

6. A communication system according to any one of the previous claims, characterised in that the modification (M) of the interrogation signal consists of a mute in the sending of the continuously sent interrogation signal (INT).

7. A communication system according to any one of the previous claims, characterised in that the command (C) sent by the interrogator unit comprises information to be read and/or written and/or executed by the identified transponder (TR1).

8. A method of communication between an interrogator unit and a plurality of transponders (TRn) comprising the following steps:

a - sending of a continuous interrogation signal (INT) by the interrogator unit;

b - sending of a message start frame (S) by a transponder (TR1);

c - detection of this frame (S) by the interrogator unit (INT);

d - modification (M) of the interrogation signal (INT) so as to set the silent transponders (TRn) into a watching state for a duration D1 so as to prevent them sending their identification signal;

e - reading of the identification message (Id) by the interrogator unit;

the method being characterised in that it also has the following steps:

f - setting the identified transponder (TR1) into listening mode (E);

g - modification (M) of the interrogation signal (INT) so as to reinitialize the watching state of the silent transponders (TRn) for a duration D2 so as to prevent them sending their identification signal (Idn);

h - sending of a command (C) by the interrogator unit (INT) to the identified transponder (TR1);

i - execution (EXE) of the command (C) by the identified transponder (TR1);

j - sending of the reply (REP) from the transponder (TR1).

9. A communication method according to Claim 8, characterised in that it also comprises a plurality of supplementary steps, these supplementary steps consisting of returning the identified transponder (TR1) to listening mode after the step j and of carrying out the operations g to j in a loop so as to perform a plurality of operations on the identified transponder (TR1).

10. A communication method according to Claim 8, characterised in that the duration D2 is equal to the duration D1 added to the time for executing an operation (OP), the duration D1 corresponding to the identifier sending duration (Di) multiplied by a random number (N).